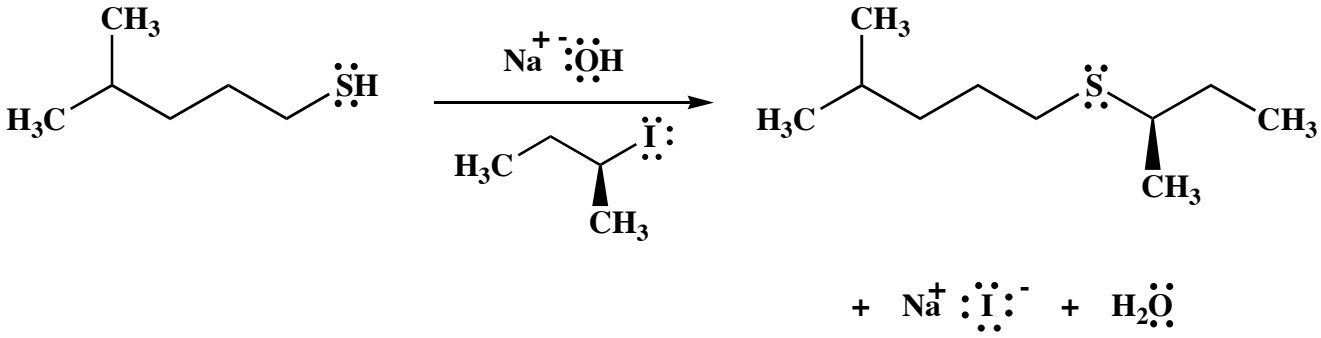
Chemistry 334R

Problem Set 2

1. Draw the mechanism of the following reaction, using the curved-arrow notation to indicate the reorganization of electron density. Denote **all** intermediates, lone pairs, nonzero formal charges, countercharges, and reversibility or nonreversibility. Finally, explain the mechanistic basis for the stereochemical outcome.



2. Draw the mechanism of the following reaction, using the curved-arrow notation to indicate the reorganization of electron density. Denote **all** lone pairs, nonzero formal charges, countercharges, and reversibility or nonreversibility. Finally, explain the mechanistic basis for the stereochemical outcome. In particular, explain why the product is a *trans*-1,2-disubstituted epoxide, and that it is a racemic mixture.